Outline for October 1, 2012

Reading: *None*   **Assignment due:** October 12, 2012 at 5:00PM

1. IDLE
   a. How to use it
   b. How to start, open a new window
   c. Python shell, prompt
2. Python, files and shells
   a. Python: programming *language* that you use to tell the computer what to do
   b. Shell: what you can type Python statements directly into, to see what they do
   c. IDLE: the program that *interprets* Python statements (executes the Python program)
   d. File: type Python statements into this, and then have IDLE execute those statements by running the program in the file
3. Example using IDLE: hello, world
   a. Explain printing
   b. Demonstrate program in IDLE
4. Second example: compute $2 + 2$, properly labeled [*twoplustwo.py*]
   a. Difference between `'2 + 2'`, `2 + 2`
   b. Print statements usually end lines
   c. Getting print statements not to end lines
5. Exceptions [*divby0.py*]
   a. Division by zero
   b. How you handle it
6. Third example: chaos program, incomplete version [*chaos.py*]
   a. Comments
   b. Function `input()` gets input as a string from user
   c. Function `float()` converts data to a floating point number
   d. Assignment to variable; evaluate right hand side first
   e. For loop generally
      i. Built-in `range()` function
      ii. Index variable `i` initialized to 0
      iii. Expression using multiplication, subtraction, and variables
      iv. Printing a number
   f. Behavior with initial values of 0.25 and 0.26
   g. Lack of error checking: what happens if I enter -0.01?